

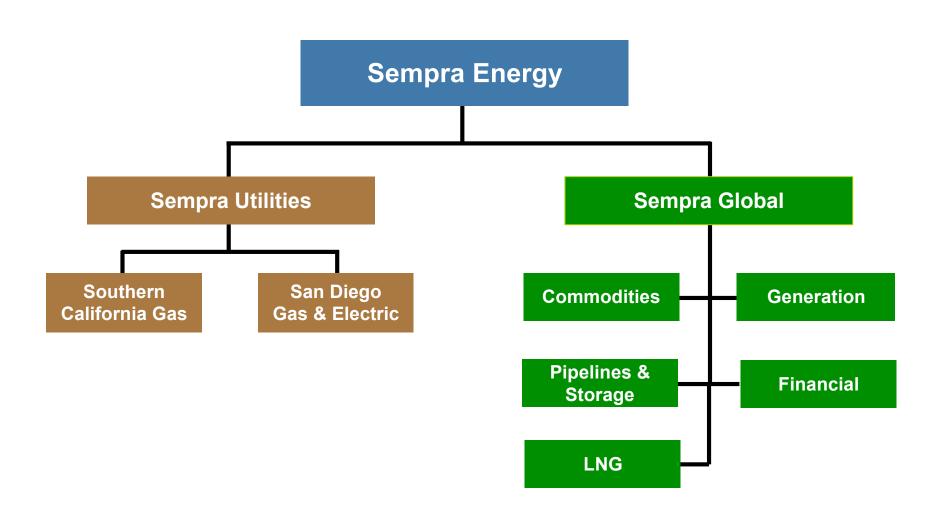
Energía Costa Azul LNG Terminal

Bill Keller

LNG Interagency Permitting Working Group July 25, 2006

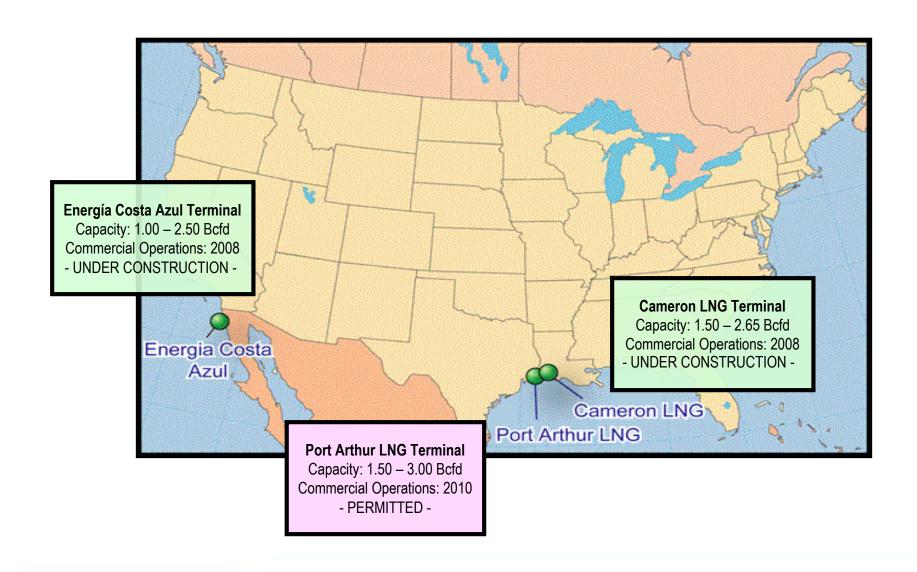


Corporate Structure





Sempra LNG





Sempra Energy in Mexico







- A leading edge natural gas distribution and transportation company in Mexico
- More than 15 years experience in Baja California and other states in Mexico
- Nearly 400 Mexican employees, more than 125,000 customers, and an investment exceeding US\$650 million
- Built and operates Termoeléctrica de Mexicali, the cleanest, most efficient natural gas-fired power plant in the country
- Energía Costa Azul's LNG terminal will provide Baja California with much needed imported natural gas supplies at competitive prices
- When this LNG project & interconnecting pipelines are complete, Sempra's investment in Mexico will be more than US\$1.6 billion



Baja California – Energy Island

PIPELINES IN MEXICO - ISOLATED SYSTEMS IN BAJA CALIFORNIA & SONORA



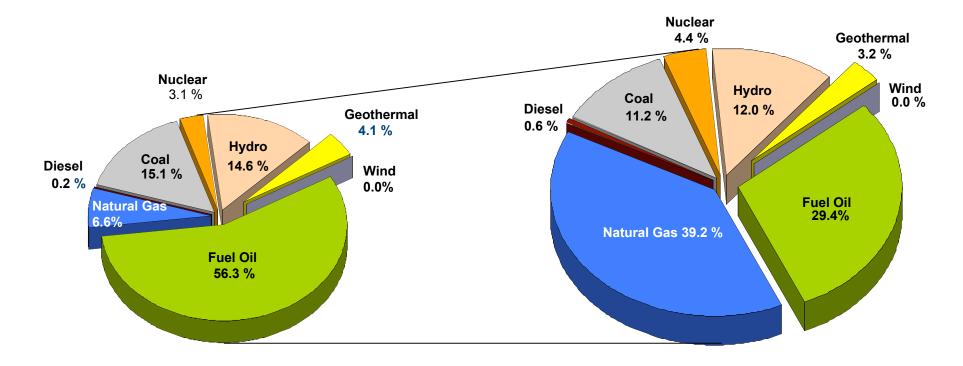


Mexican Fuel Evolution

EVOLUTION OF SUPPLY BY SOURCE

1994100% = 137,538 GWh

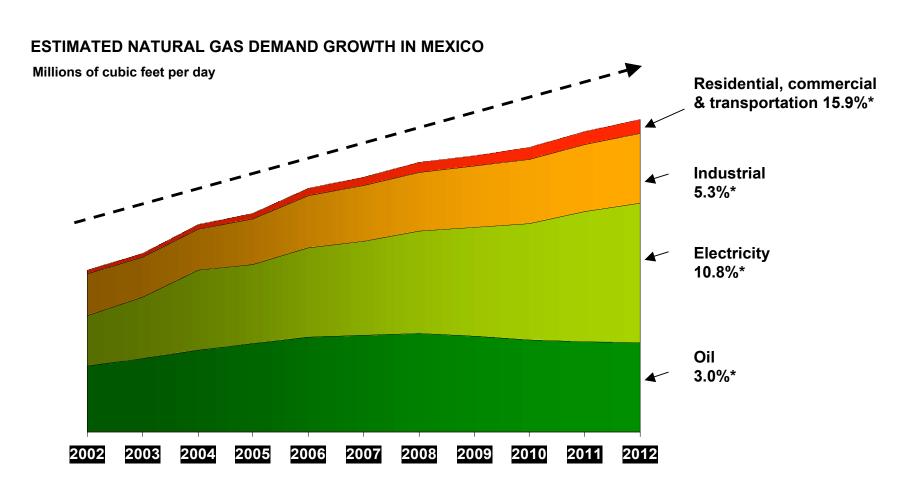
100% = 208,634 GWh*



^{*} Doesn't include self cogeneration Source: CFE



Mexican Natural Gas Demand

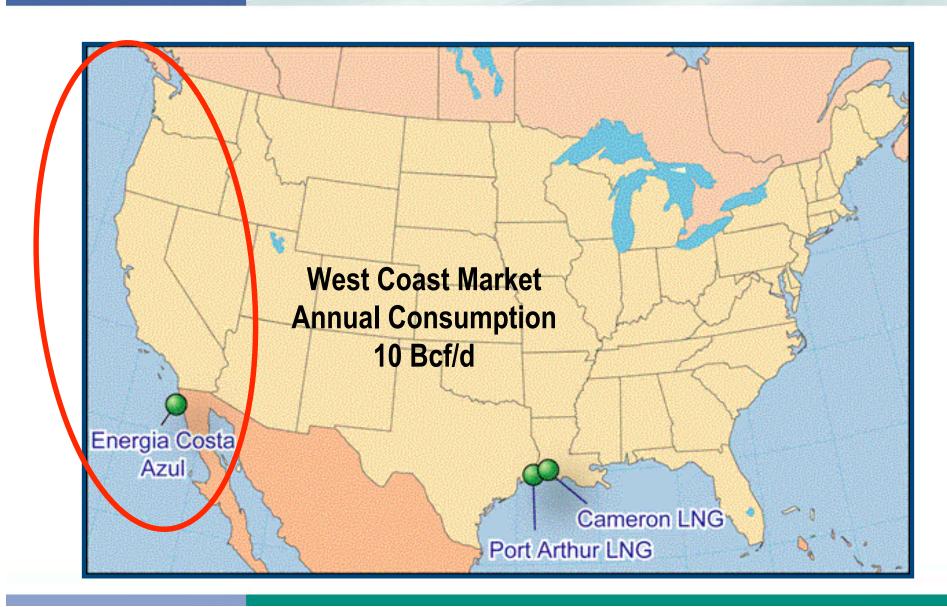


^{*} Average rate of annual growth 2002-2012

SOURCE: Francisco Barnés, Counting on LNG - Mexico's Perspective LNG 2004. Institute of the Americas



Market Demand





Project Overview

- LNG project located 14 miles north of Ensenada; 55 miles south of S.D.
- Represents a capital investment of approx. US\$1 billion in Baja California (including pipelines)
- First West Coast LNG receipt facility
- Fully permitted
- Capacity fully contracted
- Construction underway
- Commercial operations early 2008
- Capacity of 1.0 Bcf/d



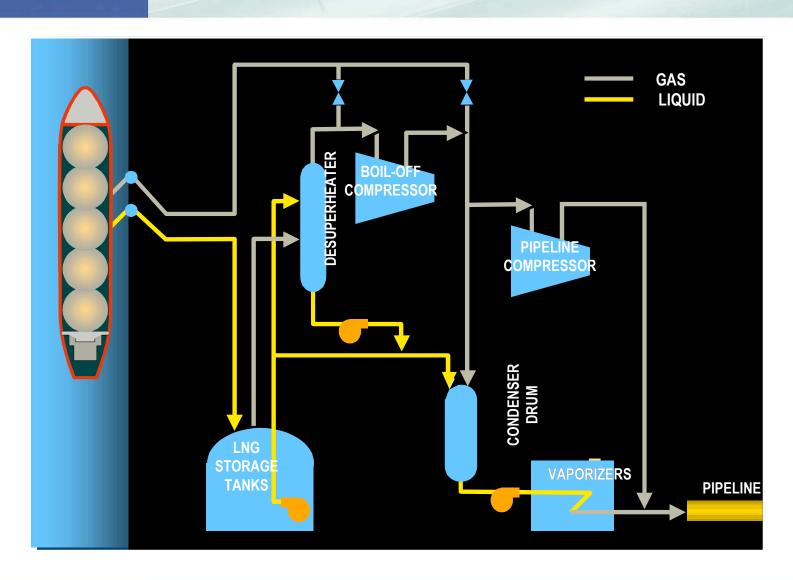


LNG Terminal





Regasification





Pipelines





Status of Permits

- Environmental Permit (SEMARNAT) ISSUED
- Storage and Re-gasification (CRE) ISSUED
- Land Use Permit (Municipality of Ensenada) ISSUED
- Port Concession (SCT) Permit ISSUED
- Environmental Permit (SEMARNAT) for Spur Pipeline ISSUED
- Seashore Permit (ZOFEMAT) ISSUED
- City of Ensenada Permit (Terminal Construction) ISSUED



On-site Nursery

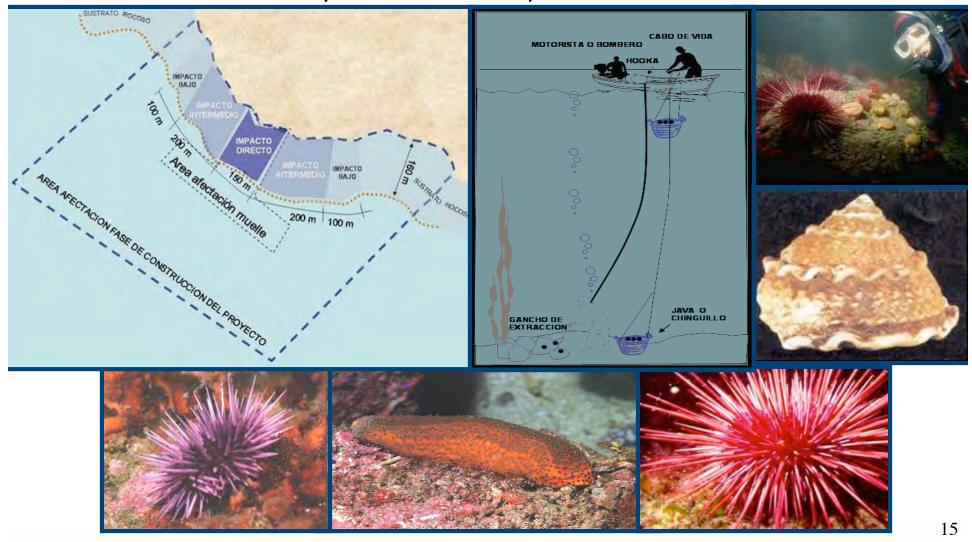
Over 5,000 Ferrocactus relocated & protected





Relocation of Marine Life

Relocated over 670,000 sea urchins, sea cucumbers & sea snails

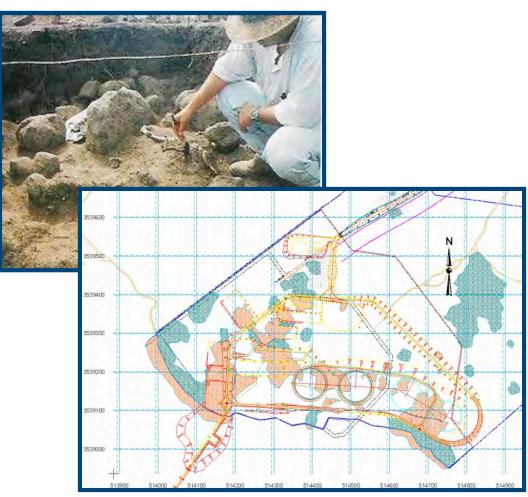




Preserving Cultural Artifacts

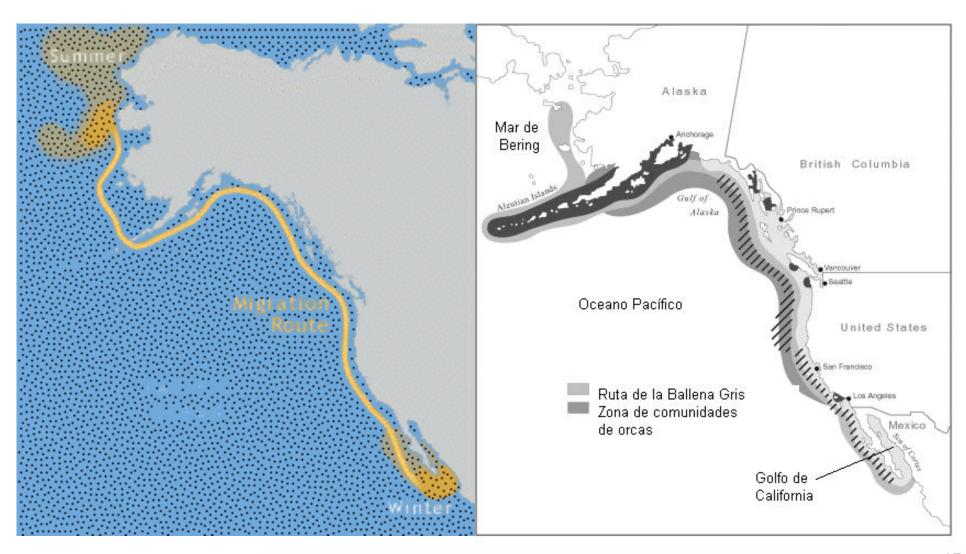
Working in Partnership with INAH







Migration of the Gray Whale





Terminal Construction





Terminal Contractor





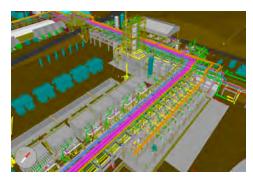




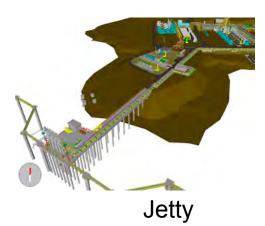


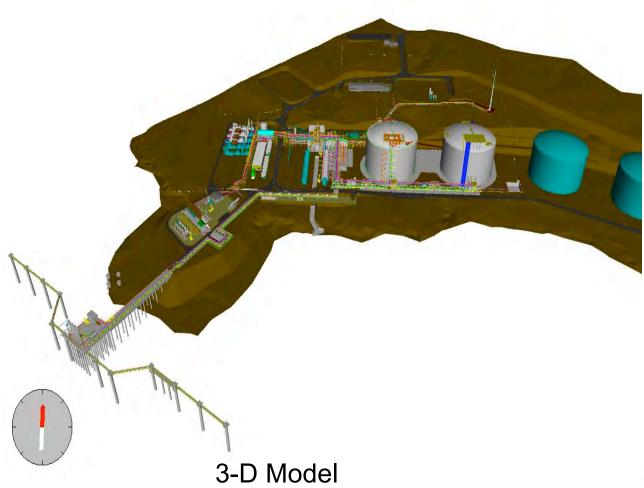


Engineering



Process Equipment







Physical Model



HR Wallingford (Wallingford, UK)



Health & Safety



Health Screening



Safety Recognition



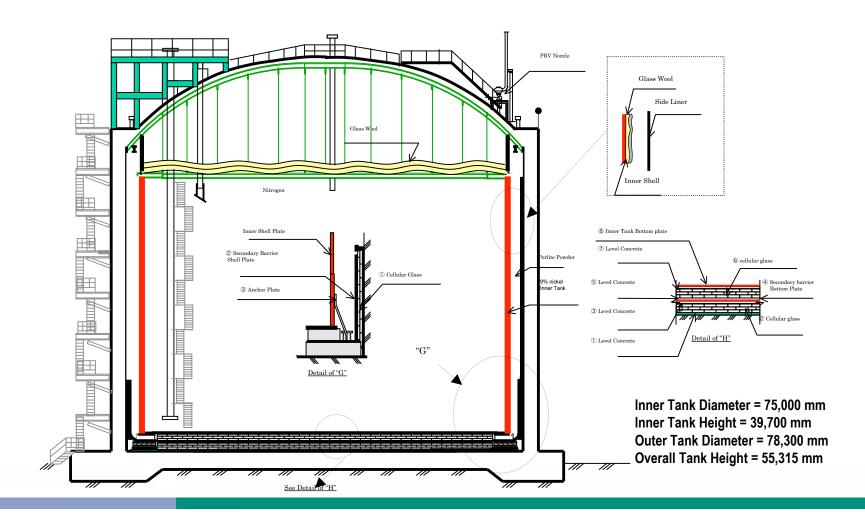
Storage Tanks





Tank Design

160,000 m³ capacity full containment LNG Tanks



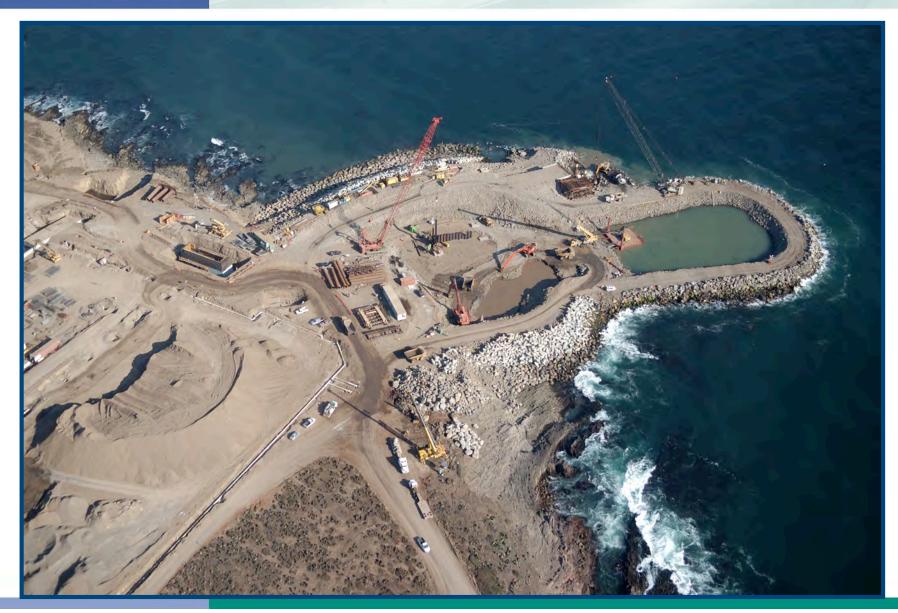


Roof Raising





Terminal Jetty





Ensenada Construction Site





Breakwater Contractor

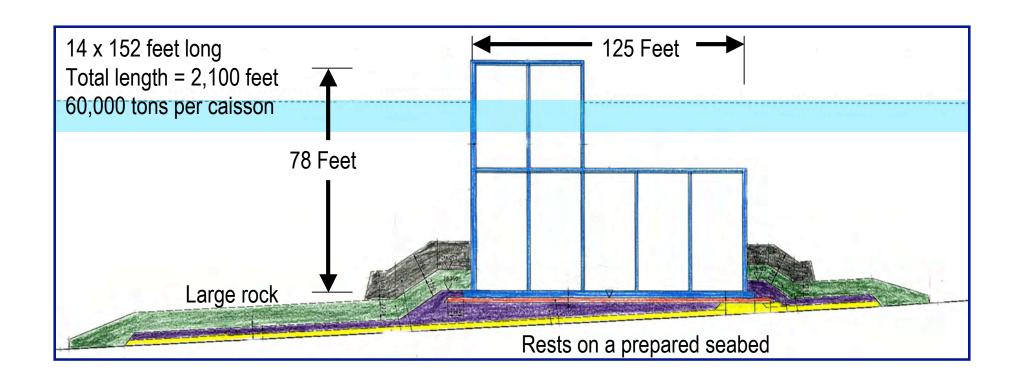








Breakwater Caisson





Geotechnical



Offshore Geotechnical Survey



Core Samples



Modeling



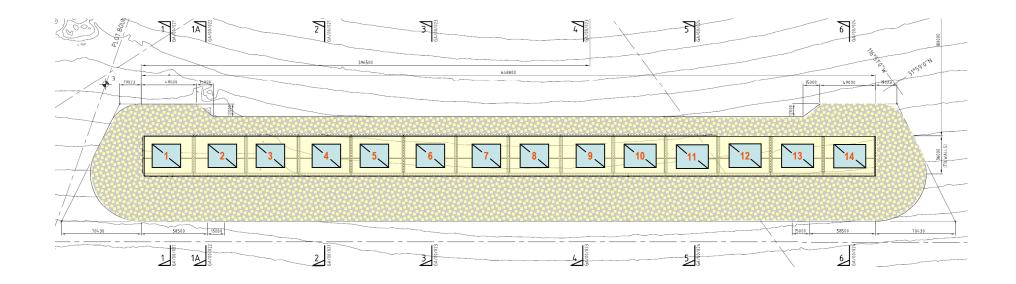
2D Model - 1: 1,000-year wave (Inverted "T" design)



HRW 3D Model - 100-year wave



Caisson Arrangement





Caissons





Off Shore Work



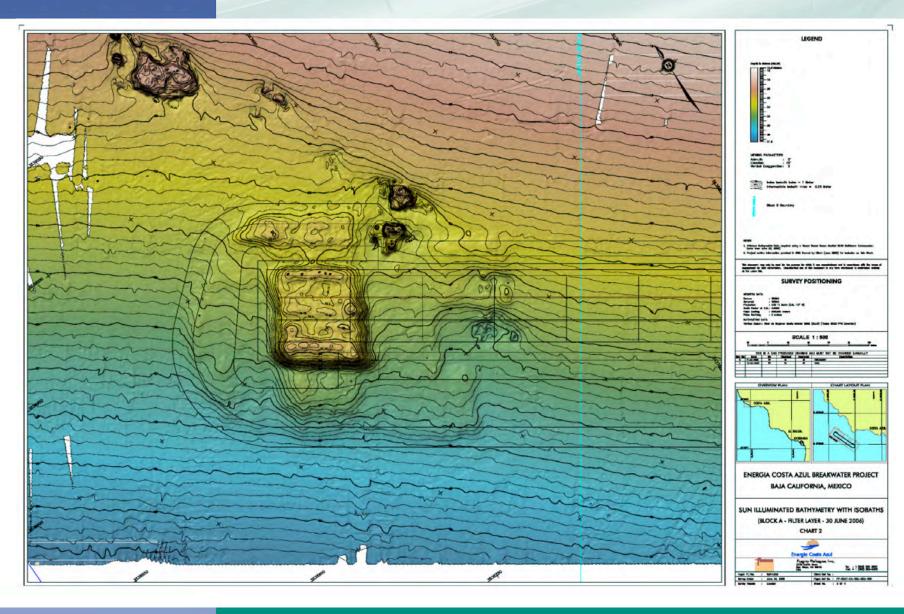
Filter layer placement



Anchor block placement



3-D Sonar





Caisson Placement



Example Of Caisson Under Tow



Pipeline Construction Schedule



<u>Project</u>	Completion Date
Spur Line 45 miles, 42"	08/15/07
TGN II 10 Miles, 24"	12/14/07
Algodones Compressonstation 35,000 HP	or 03/04/08



Local Economy



LOCAL EMPLOYMENT

- Partnering with *ProduCen*, a local economic development agency to provide businesses with job opportunities at Energía Costa Azul
- As of June 2006, more than US\$110 million has been awarded to Baja California suppliers.
 In addition, nearly US\$76 million was paid to other suppliers of goods and services in Mexico
- New Jobs:
 - ✓ 1,900 in Construction (1,714 from Mexico)
 - √75-80 Managers & Operators



Local Economy (Cont'd)





BUSINESSES

 Working with local businesses, associations, chambers and EDCs to help businesses thrive and strengthen the economy

LOCAL ECONOMY

- Estimated local purchase of goods and services by the end of construction:
 - ✓ Up to \$330 million in Baja California*
 - ✓ Of which, up to \$226 million in Ensenada*

^{*} Colegio de la Frontera Norte



Social Involvement





SPONSORSHIPS

 Working with associations to support initiatives that promote economic development

COMMUNITY INVOLVEMENT

- Investing in partnerships with nonprofits in the areas of education, health, safety and environment
- Established a special fund in Ensenada to support important local community initiatives



